

Abstract:

Page 26, in the abstract section, replace with the following new abstract paragraph:

**-- A MULTICHANNEL FILTER-BASED HANDHELD
ULTRA WIDEBAND COMMUNICATIONS**

Abstract of the Disclosure

A multichannel filter-based ~~outdoor~~ handheld UWB communication transceiver is provided presented for outdoor operations, according to some embodiments. The multichannel filter may be reused to produce the ~~11~~ multichannel UWB signal with multi-carrier frequencies by using either one single digital FIR lowpass shaping filter or one digital cascaded FIR filter including the digital multiband FIR lowpass shaping filter and the digital FIR rejected lowpass filter. Using eleven multichannels with multicarrier modulations, the invented handheld UWB communication transceiver can transfer the transmit and receive UWB signals at a with scalability data rate[[s]] up to 7.15 Gcps with scalability capabilities, for the outdoor operations. In addition, the handheld UWB communication transceiver can be controlled in a programmable way to avoid interference with WLAN devices.